

Customer No.: 31561  
Application No.: 10/604,173  
Docket No.: 10873-US-PA

REMARKS

Present Status of the Application

The Office Action dated June 28, 2006 rejected claims 1-8, 10-13 and 15 under 35 U.S.C. 102(b) as being anticipated by Kihara et al. US 5,889,504 (hereinafter "Kihara").

In addition, claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kihara et al. US 5,889,504 (hereinafter "Kihara").

Applicant has canceled claims 1-3 and amended claims 4 and 10 to more clearly define the present invention. After entry of the foregoing amendments, claims 4-15 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Claim Rejections – 35 U.S.C. § 102

*The Office Action rejected claims 1-8, 10-13 and 15 under 35 U.S.C. 102(b) as being anticipated by Kihara et al. US 5,889,504 (hereinafter "Kihara"). Applicant respectfully traverses the rejections for at least the reasons set forth below.*

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "See M.P.E.P. 2131, Latest Revision August 2006".

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Applicant has canceled claims 1-3. In addition, Applicant respectively submits Kihara fails to teach or suggest the limitations "the redundant stages and the driving stage groups are electrically connected in serial" and "the redundant stage is the driving stage installed with a redundant device" as claims 4 and 10 recited.

The office action stated Kihara has disclosed when the right SR3 is not performing the normal shifting operation, on the other hand, the switch circuit 71 controls the transmission gates 72 and 73 so that the gate 72 is turned off while the gate 73 is turned on. As a result, the data signal from the right redundant register SR4 is supplied via the transmission gate 73 to the right normal register SR3 and the right redundant register SR4 of the shift register group 11 of the next stage. In other words, the right redundant stage SR4 of the previous stage is connected in series with the right normal register stage SR3.

However, applicant respectively submits in the present application, the redundant stage is the driving stage installed with a redundant device. The Examiner seems to confusing about the redundant stage and the redundant device. As shown in FIG. 7 in the Kihara reference, Kihara clearly teaches of having connecting section S1 and switching circuit 71. That is in the Kihara reference, the connection section S1 is required for switching the right normal shift register (SR3) to the right redundant shift register (SR4). Nevertheless, in the present invention, the redundant device is merged into the driving stage. Therefore, the connection section S1 is not required for the present invention. Therefore, claims 4 and 10 are patentable over Kihara as both claims include an inherent patentable element of "not having the connecting sections such as S1 which including a switch circuit 71".

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In addition, there is no teaching or suggestion in the Kihara reference to modify or merge the redundant device into the driving stage for eliminating the connection section S1. Moreover, if the connection section S1 is eliminated in the Kihara reference, the right redundant shift register (SR4) would be inoperable or cannot work for the right normal shift register (SR3). The present invention teaches away from the Kihara reference.

Furthermore, Kihara clearly teaches that the redundant device of Kihara (e.g. right redundant register capable of supplying an extra conducting path to transmit an electrical signal from the previous driving stage to the next driving stage via the current stage while the original conduct path (e.g. right normal shift register) in the corresponding driving stage is broken. As shown in Figures 4 and 7 of Kihara, each (right or left) normal shift register is correspondingly coupled with a (right or left) redundant shift register. However, as described in the present invention, when each of the driving stage is added with a redundant device, the circuit fabrication cost is increased and the integration density of the electronic elements is getting higher and higher. The more electronic elements are integrated in the same size of the chip, the greater short problems due to too many replacement devices are easily produced. Therefore, the fabrication cost and the impacts of the short circuit and broken circuit are all considered. The present invention as claimed in the amended claims 4 and 10 provides a configuration that includes a redundant stage 212, 214 subsequent to N number of the preceding general driving stages. This configuration could dissolve the previous broken or short problems, and reduce some unnecessary fabrication cost. The amendment to claims 4 and 10 do not add any new matter because it is fully supported in FIG. 2 of the present invention.

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Accordingly, the present display driving circuit as set forth in claims 4 and 10 is new and nonobvious over Kihara, or any of the other cited references, taken alone or in combination, and thus should be allowed.

If independent claims 4 and 10 are allowable over the prior art of record, then the dependent claims 5-9 and 11-14 are allowable as a matter of law, because these dependent claims contain all features of their respective independent claims 4 and 10.

Claim Rejections – 35 U.S.C. § 103(a)

*Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kihara et al. US 5,889,504 (hereinafter “Kihara”). Applicant respectfully traverses the rejections for at least the reasons set forth below.*

Regarding claims 9 and 14, pending the allowance of claims 4 and 10 as traversed in the above section based on the “patentable over” instead of the “not anticipated by” standard, dependent claims 9 and 14 are allowable as a matter of law, because these dependent claims contain all the features of their respective independent claims 4 and 10.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 4-15 are in proper condition for allowance and an action to such effect is earnestly solicited. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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